

Amendment to the Abstract:

An improved process for making stabilized polyalkenyl sulfonic acids, whereby the product resulting from the reaction between a polyalkene and sulfur trioxide is stabilized by neutralizing with a neutralizing agent prior to storage or further processing. Neutralization at this point in the process results in polyalkenyl sulfonic acid that is stable and has a decreased amount of sulfones. A process for making a stabilized polyalkenyl sulfonic acid comprising (a) reacting a polyalkene with SO₃ in a first reaction vessel; and (b) stabilizing the product of step (a) by neutralizing with a neutralizing agent as the product of step (a) exits the first reaction vessel and prior to or concurrently with entering a second vessel for further reaction or storage, wherein neutralization occurs in the absence of ammonia or sodium hydroxide. A process for overbasing polyalkenyl sulfonic acids comprising overbasing the polyalkenyl sulfonic acid with an alkaline earth metal basic salt and wherein water is used as a promoter.